

A B S T R A C T

A DNS Proxy unit (A12a) holds the domain name of an encrypted communication target node in a CUG setting table (A125a), intercepts a name resolution request for a communication partner node output from an application (A11x) to a DNS server (B1a), determines by looking up the CUG setting table (A125a) whether the communication partner is an encrypted communication target node, and if the communication partner is an encrypted communication target node, registers the IP address of the name-resolved communication partner in an encrypted communication path setting table (A142a). A data packet sent from the application (A11x) to the IP address is intercepted by a data transmission/reception unit (A14a). A data packet to an IP address registered in the encrypted communication path setting table (A142a) is encrypted by a communication encryption unit (A141a) and transmitted to the communication partner. In this way, in executing encrypted communication with a plurality of communication partners by using a communication encryption function provided by an OS, setting of the encrypted communication target node can be done by using a domain name.